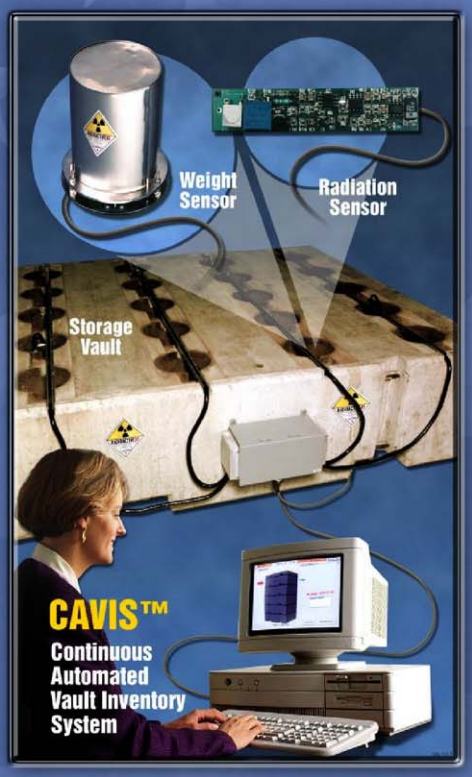
Unattended Monitoring Systems

Unattended monitoring systems allow assets to be monitored without risk to personnel or compromises to security.



Y-12 National Security Complex

Unattended monitoring systems are designed to monitor and track stored nuclear materials and hazardous material processes. These systems provide continuous, real-time status of the monitored items and alert users when anomalies occur. Unattended monitoring systems increase the security associated with monitoring high-valued assets (e.g., weapons-grade nuclear materials), improve the safety for workers, and reduce the associated labor costs.

Unattended monitoring systems use distributive computing strategies, which allow assets to be remotely monitored from a central (point) facility.

Features

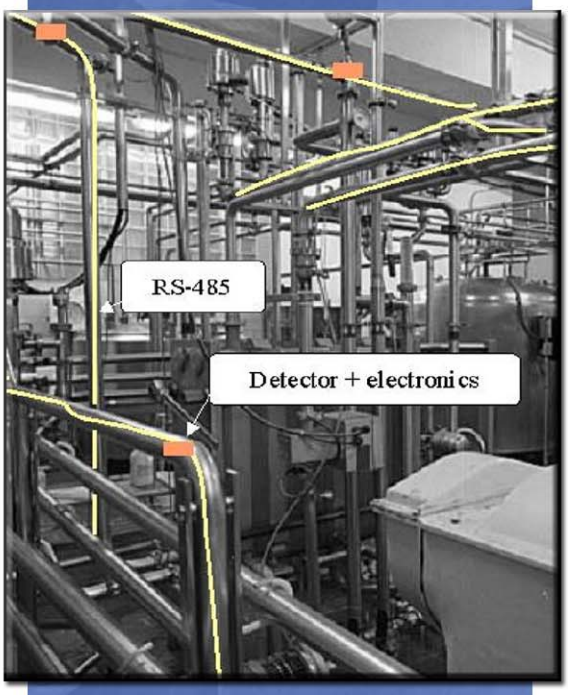
- Less worker exposure to hazards
- Highly secure (around-the-clock)
- Up-to-the-minute status of assets
- Individual item monitoring
- Chain-of-custody tracking

Continuous Automated Vault Inventory System (CAVIS™)

CAVIS™ provides real-time weight and radiation attribute confirmation from stored containers of nuclear material. The system includes an integrated set of low-cost sensors. CAVIS ™ is also capable of handling information from other remote sensing devices or systems.

Advantages of CAVIS ™

- Nuclear material inventories can be conducted remotely
- No radiation exposure to personnel
- Immediate reporting of significant attribute changes
- Multiple security layers
- Adaptable for other hazardous materials monitoring applications



Holdup monitoring can now be performed in harsh environments while significantly reducing radiation exposure to personnel and lowering labor costs.

Remote Holdup Monitoring

Remote holdup monitoring detectors are permanently mounted at pre-identified measurement points. The silicon-diode-based radiation detector performs spectroscopy sufficient for process holdup monitoring by converting gamma radiation into an electrical signal. The diode is connected to an onboard multichannel analyzer, which is controlled by an onboard microprocessor. The diodes are linked to an RS-485 communications port, thereby allowing remote monitoring.

Advantages

- No high voltage required, no scintillator used
- Monitor in harsh environments and places not easily accessible
- Increased data quantity, allowing anomalies to be detected sooner
- Elimination of lost production days for monitoring purposes

ReflectoActive™ Seals System

The ReflectoActive™ Seals System can immediately detect and locate a seal breach in a large array of monitored containers. The system uses fiber-optic technology to provide real-time, continuous tamper monitoring for 1,500 to 2,000 seals (or items) simultaneously.

Advantages

- Immediate and precise location detection of breached seals
- System flexibility (dynamic inventory)
- Adaptable for other hazardous materials monitoring

SmartShelf™

SmartShelf is a hardware and software system for asset management applications when it is necessary to track the physical location of controlled items at all times.

Advantages

- Inexpensive electronic serial numbers to uniquely identify monitored assets
- Automatic detection of theft and of system problems
- “Chain of custody” tracking of assets that move around
- Configurable to suit unique needs